

NOTES ON SOME EARLY REFERENCES TO TROPICAL DISEASES

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I. AN ELIZABETHAN HANDBOOK OF TROPICAL MEDICINE

The kinship of letters and national enterprise has never been more happily illustrated than in the closing years of Queen Elizabeth's reign. The world, grown more spacious, was daily yielding fresh material for the noble writers whose works form our inexhaustible national treasury. Within ten years around the turn of the sixteenth century there was a series of nautical adventures in close association with literary productions, showing that if the seaman exercised a moulding force on literature, literature in its turn was not without its influence on seacraft.

With all this interest in oversea attempts, attention was bound to turn to the *professional* needs of sailors, and a large literature intended for the use of seamen rapidly arose. These works have a literary as well as a scientific value and among them books on medicine adapted to the especial needs of sailors would naturally take a place (Note 1). New and strange lands yielded diseases equally new and strange, and we may therefore look to this period for the small beginnings of the special study of tropical medicine in this country. The little work which we here discuss has some pioneer claim in this regard, while it contributes an addition to the English medical works of literary merit.

In 1598 there appeared in London a small pamphlet of 25 pages by one G. W., printed by F(elix) K(ingston) for H(umphrey) L(ownes). The author has entitled his work 'The Cures of the Diseased in Remote Regions, Preventing *Mortalitie*, incident in Forraine Attempts of the *English Nation*,' the 'Attempts' being

clearly voyages to Tropical America. This is perhaps the earliest work on medicine intended for sailors published in Great Britain.

THE CVRES OF the Diseased, in remote *Regions.*

PREVENTING MORTALITY.
tie, incident in Forraine Attempts,
of the *English* Nation.

*La honra mas vale,
merecerla que tenerla.*



At London
Printed by F.K. for H. L.
1598.

Photo by Donald Macbeth, London

G. W. was a layman in physic, and relates, in a note to the reader, that 'the cause that induceth mee publiquelie to expresse

the Cure of Diseases of such consequence ([which] every judicall conceite may perceive to have been the only prejudice to our Nation in the expeditions of our time to the Southerne parts: from whence they have returned with renowned victorie, yet exceedinglie opprest withe extreame and penurious sicknesse, that hathe much more prevented the proceeding and performing of their pretensions than the power of Enemies) is not that I purpose, practitioner-like in Phisicke or Chirurgerie, to assume unto me anie knowledge in those Sciences and Faculties: But to possesse all men of remedies for such infirmities, as in my owne experience, have infinitelie impaired *English* Forces in intemperate Clymates, which I publish, for the good of those whom cause may compell to have use thereof, and would be so censured of all.'

The author had voyaged principally to the Spanish Main, and was captured by the enemies of his country. In his dedication '*To the Queenes most Excellent Majestie*' he writes of himself that 'in my unjust imprisonment in Spayne, it pleased God to afflict me with the *Tabardilla* Pestilence: whereof being in cure, by an especiall Phisition of the King, I observed his Methode for the same, and such other Diseases as have perished Your Maesties people in the Southerne parts, Which Remedies have since, by my direction, taken the like good effects.'

The most pleasing feature of the little book is the verse with which our author opens and concludes his theme. The lines are here given in full.

THE WRITER'S INTENT

Man that is borne, not for himself is borne,
 But for his Prince, his Countrie, and his friends.
 To helpe the sicke, distressed and forlorne,
 Are works of Mercie, Man to man extends.
 Who hath the power, and meanes, and will not cherish,
 Shall with the Hider of his Tallent perish.

Transgression first did sinne in man beget,
 Sinne, sickness, death, and mischiefes many more:
 For as men's mindes on wickednes were set,
 So plagues increast, which were not knowne before.
 But God, whose mercie, iustice doth exceed,
 Sends helps for hurts, and salves for sore at need.

CONCLUSION

Let no man boast of beautie, strength, or youth :
 For, like to flowres we bud, we spread, we fade :
 Nothing is certaine, but the certaine truth,
 To-day a man, to-morrow but a shade.
 His last apparell, cut out with a spade,
 Of nature's coarsest stuffe (I meane) her molde,
 Must shroud the corps, that living shone in golde.



TO THE QUEENES
 MOST EXCELLENT
 MAIESTIE.

SAcresd Soueraigne,
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 Which Remedies haue since, by my
 direction, taken the like good effects.
 A 3 And

Even in his Index the writer bursts forth into verse, and the book is prefixed by the following table:—

THE BOOKE'S CONTENT

The burning fever, calde the *Calenture*,
 The aking *Tabardilla* pestilent,
 Th' *Espinlas* prickings which men do endure,
Cameras de Sangre, Fluxes violent,
 Th' *Erizipila*, swelling the Pacient,
 The *Tiñoso*, which we the Scurvey call,
 Are truly here describ'd, and cured all.

English seamen of the period had learned much of their craft from the Spaniards, and G. W., like many contemporary writers on nautical subjects, uses Spanish words and quotes Spanish proverbs freely. A few extracts from the pamphlet are here appended, with identification and descriptions of the diseases with which it deals.

By the *Calenture* is probably meant the conditions now classed as heat-stroke or sunstroke. The word, which in Spanish means simply a heat or fever, was introduced into England from Spain about 1590. The *Calenture* was considered to be especially a disease of sailors in the Tropics, and by the popular fancy it was associated with a delirium in which the patient imagined the sea to be a green field and desired to jump into it. Cases are even recorded where the disease is said to have seized upon whole crews (Note 2).

Shakespeare, in his famous description of the facies Hippocratica in the death of Falstaff, was perhaps thinking of this condition. 'After I saw him fumble with the sheets and play with flowers and smile upon his finger ends, I knew there was but one way, for his nose was sharp as a pen, and 'a babbled of green fields.' (Henry V, Act II, Scene III.) This passage was first printed in 1598, and must have been written about the same date as our pamphlet. (The text is here given with the well-known emendation of Theobald.)

'The *Calenture*,' says one author, 'is the most usuall Disease, happening to our Nation in intemperate climats by inflammation of Blood and often proceeding of immoderate drinking of wine.' The treatment suggested would appear by no means irrational, even nowadays, for some types of the disease. 'So soone as the Pacient

is perceived to be possest of the Calenture, except the Chirurgion defer it for danger of the signe open the Median veine of the right arme, and take such quantitie of blood, as agree the to the abilitie of the bodie, which not asswaging the heate by the next day; to open the same veine in the left arme, and take so much more blood at his like discretion. And the bodie being Costive (for so commonly the Pacients are) to give him some meete Purgation; and not to permit him to drinke other than water coolde, wherein Barley and Anniseedes have been sodden with bruised Licorice And not to suffer the Pacient to drinke, seven dayes after he is perfectlie recovered, any other drinke, than such water.'

Tabardilla is Spanish for a 'burning fever,' but, unlike the Calenture, the word did not become naturalized in England. Under the term *Tabardilla*, our author is apparently describing cases of yellow fever, together with others of a haemorrhagic form of bilious remittent malarial fever, and, perhaps, some cases of Dengue. 'The Disease,' he says, 'is so exceedingly pestilent and infectious, as by the same whole kingdomes in both the Indias have been depopulated.'

He describes an initial headache, jaundice, and vigil which would well apply to yellow fever, where, however, the purpuric rash is a rare phenomenon. 'The *Tabardilla*,' he tells us, 'first assaults the Pacient very vehemently with pain in the head and backe, and the bodie seeming yellow, is some signe thereof, and within twenty-four howres it is so tortuous that he that is possest thereof cannot sleep or rest, turning himself on either side, back and bellie; and burning in the backe most extremely. And when it growes to perfection, there will appeare red and blew spots upon the pacient's brest and wrists.'

The treatment for the *Tabardilla* is purgation and phlebotomy, the patient is to drink water only, 'and to bee carefull of his diet: for if this *Tabardilla*, which we call here in England God's Tokens, come again unto the Pacient he can hardly escape it. And it is no lesse infectious than the usual English Plague.'

The symptoms and character of the plague and its 'tokens,' as the associated rash was called, would have been well remembered by the author, for in 1592 there occurred one of the worst outbreaks

of this epidemic recorded in London. The disease lingered there until the end of the century, and made necessary wide circulation by the Government of a leaflet, entitled 'An advise set doune upon her maiesties expresse commandement by the best learned in Physicke for the preservation of her Good Subjects from the plague.' Although G. W. treats the infectious nature of plague as assured, the discussion of this barren topic occupied a large field in medical literature for another two hundred and fifty years (Note 3).

The *Espinlas* we are unable to identify. We therefore give the author's description of it in his own words.

'The *Espinlas* is a very strange sicknes, and usual in those parts, to such as take cold in their breasts, after great heat or travell. And most times it comes to those that lye with their breasts upon the ground especially in the night.

'TO KNOW THE *Espinlas*.

'The partie having the *Espinlas* will be giddie in the head and have pain and pricking at his breast, as with many thorns; wherefore I thinke it is so called of Spina and Espina, the Latine and Spanish words for a Thorne. And there will be upon the Huesso radio [Anglicé—radial bone], or Focell, being the upper part of his arme, a hand breadth above the wrist, a little kernell by which it is certainly knowne. And he that hath this Disease will not have appetite to meate or drinke; nor cannot digest meate, although he bee procured to take it.

'TO CURE THE *Espinlas*.

'The *Espinlas*, appearing by the former signes: Take Olive oyle presently, and therewith chafe the Kernel upon the Patients arme, using so to do twice every day until it be dissolved: and laying Oyle likewise upon his breast, stroke it upward somewhat hard with the hand: then spread fine flax upon it and the kernell, making it fast with a rowler: and within two or three days the diseased thereof will be recovered. Whereas els it is very dangerous to deprive them of life.'

By '*Cameras de Sangre*, which is the Bloodie Flux,' forms of

Tropical Dysentery are clearly indicated. 'The Pacients,' we are told, 'often die suddenly without feeling much grieve They must be thoroughly purged of the sliminess engendered in the passages Give to purge him in the morning halfe a pint of White Wine coold, wherein $\frac{1}{2}$ ounce of Rubarb hath been sodden,' and for diet 'if it be on Land, the livers of Goates (especiallie), Sheepe, or Bullocks roasted: And if at Sea, Rice, only sodden in water until the infirmitie is perfectly asswaged.'

The word *Erysipelas* is as old as medicine itself, and although the *disease* was described by the father of medicine, the *term* acquired an exact significance only in modern times. Our author, however, under the heading 'Erizipila,' gives a good description of the disease in its modern connotation. 'He that hath the *Erizipila*, will bee swolne in the face, or some part of him, and it will be of yellow colour mixt with red. And when it is thrust with the finger, there will remaine a signe or dent of the same; and then by degrees it will fill againe to the former proportion. And it speedily infecteth the inwarde parts, because such swellings come sooner to perfection in hot places than in temperate Countries. And therefore the diseased thereof, must bee immediatlie provided of remedie.'

The treatment of Erysipelas is interesting. 'Some savage people have first found perfectly to cure this *Erizipila*, by brusing so much *tobaco*, as will yeeld spoonfuls of juyce and to drinke it presently after they are infected therewith. And to launce the places swolne; thereunto putting *Casada* wet (Note 4), and made in paste. Continuing in colde places and shadie, neere Rivers: and not to travell or labour, until they are recovered. But the Spaniards in India, set so many *Ventoses* (Note 5) upon the swolne places as they can containe, scarrifying them, and drawing out the corrupted Humour so congealed.'

'*The Tiñoso, or Scurvy*,' is described as 'an infecting Disease, sufficientlie known unto Seafaring men: who by putrified meates, & corrupted drinckes, eating Bisket flowrie, or foule crusted, wearing wet apparell and slothfull demeanour obtaine the same.' The disease, our author says, is 'so ordinary at Sea, as it hath seldomẽ seen, any Ship or Pinnice, to be foure moneths upon

any Voyage but some of the Companie have had this Disease.' He knows well its symptoms, including the joint lesions, the rashes, and the swollen gums. Exercise, he considers, is very necessary to avert the Scurvy—an important point in those days when the Atlantic was crossed in tiny ships,—and 'also it is a certaine and assured medicine against this Disease, to have such quantitie of Beere, brewed with Graynes & Long pepper, as in the morning twice everie weeke there may be given a good draught to a man But White Wine or Syder, boyled and brewed with Graynes & Long peper, in like quantitie is very singular good. And it is not fit to suffer the gums to abound with flesh: and therefore sometimes let them bleede, & cleere them withe strong Vinegar,' nor should the patients 'be suffered to eat any salt meates, if other may be had.'

II. A NOTE ON AN EARLY RECORD OF SLEEPING SICKNESS IN WEST AFRICA

The earliest mention of the Sleeping Sickness is usually considered to be in Winterbottom's 'Account of the Native Africans in the neighbourhood of Sierra Leone,' published in 1803 (Note 6). In 1734, however, on his return from a voyage to West Africa, John Atkins, a Naval Surgeon, gave a clear description of cases of the disease on the Guinea Coast. As Atkin's journey had been made in the year 1721, the observation must be referred to that date.

His description is to be found in the Appendix to his little volume 'The Navy Surgeon,' and runs as follows:—'The *Sleepy Distemper* (common among the Negroes) gives no other previous Notice, than a want of Appetite two or three days before; their sleeps are sound, and Sense & Feeling very little; for pulling drubbing or whipping will scarce stir up Sense and Power enough to move; and the Moment you cease beating the smart is forgot, and down they fall again into a state of Insensibility, drivling constantly from the Mouth as if in deep salivation; breathe slowly, but not unequally nor snort.

'Young People are more subject to it than the old; and the Judgment generally pronounced is Death, the Prognostick seldom failing. If now and then one of them recovers, he certainly loses the little Reason he had, and turns Ideot. . . .

'In Searching for the Cause of this Distemper it will be necessary to repeat what I have observed, that the Bulk of Slave-Cargoes mostly consist of Country People, as distinguished from the Coast people, apparent if the principal Way of Supply be considered. At Whydah more Slaves are bought than on the whole Coast besides: & Why? The King of that Country, and his next neighbours, understand sovereignty better than others, and often make War (as they call it), to bring in whole villages of those more simple Creatures inland, to be sold at Market, and exchanged for the Tempting Commodities of *Europe*, that they are fond and mad after.

'The immediate cause of this deadly Sleepiness in the Slaves is evidently a Super-abundance of Phlegm or Serum, extravasated in the Brain, which obstructs the Irradiation of the Nerves; but what the procatartick Causes are, that exert to this Production, eclipsing the Light of the Senses, is not so easily assigned. . . .

'The cure is attempted by whatever rouses the Spirits; bleeding in the jugular, quick purges, Sternatories, Vesicatories, Acupuncture, Seton, Fontanels, and Sudden Plunges into the Sea; the latter is most effectual when the Distemper is new, and the Patient as yet not attended with a drivling at Mouth and Nose.'

John Atkins lived from 1685 to 1757. A short account of his career, mostly from his works, is given by Dr. Norman Moore in the Dictionary of National Biography. Atkins was a good observer, and a man of some learning and independent character, indeed too independent for success in the service he had chosen, for disputes and criticisms of his brother officers led to his failure to find re-employment in the Navy after his return from Africa. Little else is known of his life, nor have his published works attracted any considerable attention (Note 7).

III. AN EARLY ACCOUNT OF THE SAND-FLEA, *PULEX PENETRANS*

Some of the earliest settlers in the New World have left accounts of how their earthly sojourn was made burdensome by the ravages of the little sand-flea or chigoe. The first printed record is, perhaps, that of the Spanish writer Fernandez de Oviedo, who in 1547 mentions the insect in the West Indies (Note 8).

In 1558 there was published in Paris a book with the curious title 'Les Singularitez de la France Antarctique, Autrement nommée Amerique (sic!): et de plusieurs Terres & Isles decouvertes de

LES
SINGVLARI-
TEZ DE LA FRAN-
CE ANTARCTIQUE, AV-
trement nommée Amerique:& de
plusieurs Terres & Isles de-
couvertes de nostre
temps.

Par F. André Theuet, natif d'Angoulesme.



A PARIS,
Chez les heritiers de Maurice de la Porte, au Clos
Bruneau, à l'enfeigne S. Claude.
1558.

AVEC PRIVILEGE DV ROY.

Photo by Donald Macbeth, London

nostre temps, Par: F. André Theuet, natif d'Angoulesme.' The book was translated into English ten years later, and published in

London in black letter type as 'The new found worlde, or Antarticke, wherein is contained wonderful and strange things, as well of humaine creatures, as Beastes, Fishes, Foules, and Serpents, Trees, Plants, Pines of Gold, etc., etc.

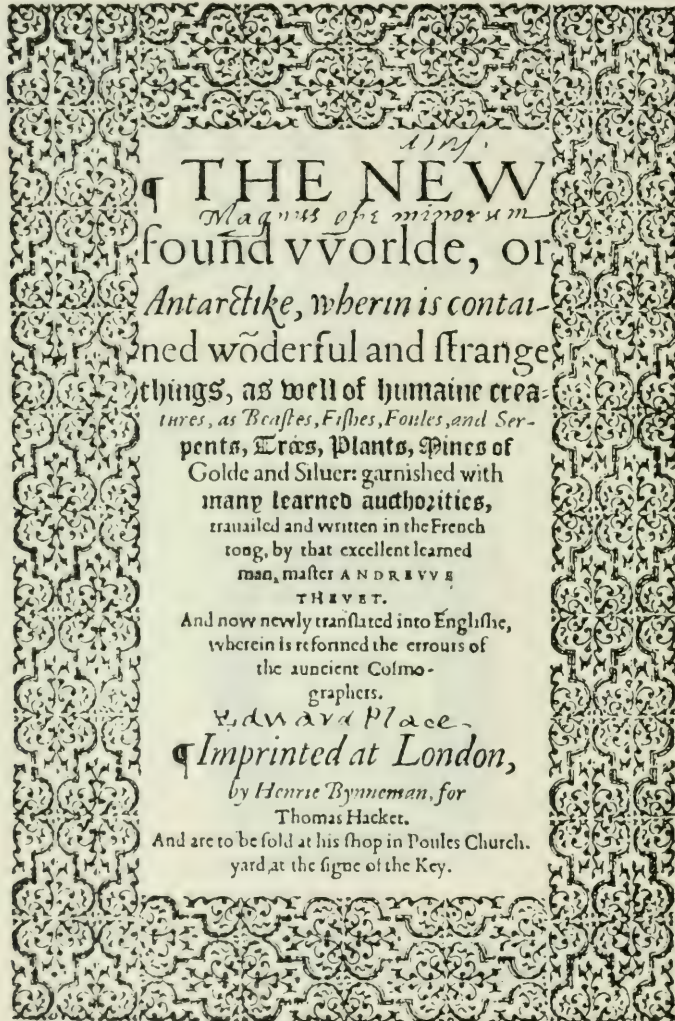


Photo by Donald Macbeth, London

travailed and written in the French tong by that excellent, learned man, Master Andrew Thevet, and now newly translated into Englishie.'

The following quotation, referring to the sand-flea, is made from the English translation, with a few corrections and additions from the original French where necessary:—

‘I will not forget, that among their diseases they have one marvellous indisposition, which commeth by little wormes that enter into their feete, named in their language *TOM*, that are little ones [French ‘*lesquels ne sont gueres plus gros que cirons*’—are scarcely bigger than *acari* (Note 10)] and I thinke that they ingender in their feet: for there will be sometimes such a number in one place that they will rayse a knob as big as a beane, with doloure and paine in that place, the which paine also chaunced to us, for being there, our feete and our handes were covered with little clothes [French ‘*bosettes*’ = bumps], in which when they were broken, was onely one white worme with filthe. And for to shunne this grieve, the wilde men make a certain oyle of a fruite named *Hibonconhu*, like unto a date, the which is not good to eate; they preserve it in little vessels of fruites, named in their language *Caramenio*, and therewith they rub the places that are grieved, a thing very necessary [French ‘*propre*’ = suitable] as they doe affirme against these wormes.

‘Also sometimes they anoint therewith all their bodies when they are weary. Besides this the oyle is proper for woundes and sores, as they have knowne by experience.’

The word *Hiboconhu* used here is probably the equivalent of *Ipecacuanha*, under which title were, and still are, known a considerable number of plants of Brazil and other parts of the New World. *Hiboconhu* is not, however, the *Ipecacuanha* of our official Pharmacopoeia, the fruit of which bears no resemblance to a date. The drug *Ipecacuanha* itself did not reach Europe until the latter part of the seventeenth century.

André Theuet, the author of this work, lived from 1502 to 1590. He was a man of humble birth, who entered upon theological studies, but became indiscriminate in his wide reading. He was known in his day for his vast memory and for his restless and wandering habits. He travelled both in the Orient and in the New World, and wrote very credulous accounts of his journeys. Returning to France, he took orders and spent the declining years of his life in literary work.

NOTE 1. The relationship of literature and seacraft of this period, the reader will find interestingly discussed by Commander C. N. Robinson and Mr. John Leyland in Vol. IV of the 'Cambridge History of English Literature,' and by Sir Clements Markham in his 'Life of John Davis,' London, 1889.

NOTE 2. Those bitten by the Tarantula were supposed to be similarly affected by a desire to jump into the sea (*vide* Athanasius Kircher's 'Magnes sive de Arte Magnetica Opus,' Rome, 1641, p. 870), as were also, at times, the St. Vitus' dancers of the Middle Ages.

NOTE 3. Haeser, in his 'Historisch-pathologische Untersuchungen,' Dresden, 1841, part 2, p. 26, identifies the Tabardilla with Typhus. He considers, on the authority of the three writers, Vallesius, Toreus, and Coyttarus, that there was an epidemic of this disease in Spain in 1557. This disease can, however, scarcely be the one described by our author under the name Tabardilla, the symptoms of which hardly fit in with those of Typhus.

NOTE 4. By 'Casada' is doubtless meant Cassava or Mandioc, a plant extensively cultivated in the West Indies and in Tropical America. The fleshy, tuberous roots are used as food, and from them Tapioca is obtained. A cold compress could be made from them.

NOTE 5. Ventose: an obsolete word for a cupping glass.

NOTE 6. The first detailed account of the disease was probably that of Clarke in the 'London Medical Gazette,' September, 1840, p. 970, and later in the 'Edinburgh Monthly Journal of Medicine,' April, 1842, p. 32, and the 'Trans. of the Epidemiological Society,' I, 116.

NOTE 7. The publications of John Atkins are as follows:—

(1) 'The Navy Surgeon,' with the Appendix quoted above, London, 1734. 2nd Edition, London, 1737.

(2) 'A Voyage to Guinea, Brasil, and the West Indies; in His Majesty's Ships, the Swallow and Weymouth,' London, 1735. An account of this voyage is abstracted in Moore's 'Collection of Voyages and Travel,' London, no date (? 1740), and in 'A Collection of Voyages and Travels,' published in London anonymously in 1745. Some attention is given to these writings of Atkins in the 'Allgemeine Historie der Reisen' of J. J. Schwabe, Leipsig, 1748.

(3) 'A Treatise on Chirurgical Subjects,' London, 1736 (?). This volume contains some chapters of (1) re-printed, and among them the passages on 'the sleepy distemper.'

NOTE 8. Oviedo, 'Cronica de las Indias' 1547, fol. XXI, gives the animal the name of 'nigua.'

NOTE 9. The word 'ciron,' which I have here translated 'Acarus,' is a term which is of doubtful meaning in any work which appeared before the microscope came into use. The little *Acarus scabiei*, being on the limits of unaided vision, is in early writings repeatedly confused with the *Pediculus*, and although Saint Hildegard in the twelfth century, Guy de Chauliac in the fourteenth century, and Paracelsus in the succeeding century, had all definitely referred to the *acarus*, it is usually difficult to be sure of the identity of the organism, even in the works of these writers. In the present context, however, the reference to the *burrowing* habits of the chigoe, and the statement that it is scarcely larger than the 'ciron,' makes the translation 'acarus' a fairly safe one.

Addendum. Since writing the above the writer's attention has been drawn to a reference to Atkins' work by Dr. E. D. Whittle in the 'Malay Medical Journal' for April, 1911, and in the Bulletin of the Sleeping Sickness Bureau, for August, 1911, p. 329.